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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/413,348      | 10/06/1999  | NORIHISA FUKUTOMI    | Q56091              | 1912             |

7590 03/21/2003

SUGHRUE MION ZINN MACPEAK & SEAS  
2100 PENNSYLVANIA AVENUE NW  
WASHINGTON, DC 20037

EXAMINER

KIM, CHRISTOPHER S

ART UNIT

PAPER NUMBER

3752

DATE MAILED: 03/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |                 |
|------------------------------|-----------------|-----------------|
| <b>Office Action Summary</b> | Application No. | Applicant(s)    |
|                              | 09/413,348      | FUKUTOMI ET AL. |
| Examiner                     | Art Unit        |                 |
| Christopher S. Kim           | 3752            |                 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 28 February 2003.

2a) This action is FINAL.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 2-9 is/are pending in the application.

4a) Of the above claim(s) 3-5 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 2 and 6-9 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on 08 August 2000 is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

|  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 6, 2003 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 112***

3. Claims 6 and 7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 6 and 7 recite "wherein substantially all of said buffer portion contacts fuel in said fuel passage." The disclosure, as originally filed, does not appear to provide adequate support for such limitation.

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4. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites "a coil" in line 10. This appears to be a double inclusion of the "solenoid" recited in line 2.

Claim 2 recites "said end portion of said coil being the end portion nearest to said needle valve." The term "nearest" is a comparison term. Applicant recites the said end portion being the nearest. It is uncertain what elements are being compared relative to each other for the nearness criteria.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 2, 6-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Reiter (6,224,002).

Reiter discloses a fuel injection valve comprising: a needle valve 18; an armature 21; a solenoid/coil 1; an elastic member 35; a sleeve 33, 34; a core 2; a valve holder 13, 16.

7. Claims 6-9 (as best understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Asano (5,188,297).

Asano discloses a fuel injection valve comprising: a buffer portion/means for damping 39 being an elastic member (O-ring); a fuel passage 22f; an end face (down stream side of 32); a nozzle opening 27. O-ring 39 inherently functions as a buffer portion.

### ***Response to Arguments***

8. Applicant's arguments filed January 6, 2003 have been fully considered but they are not persuasive.

In response to applicant's argument that figure 1 clearly shows a buffer portion 18 wherein at least 3 of its sides contact fuel passage, figure 1 shows a buffer portion 18 (a rubber ring per applicant's specification on page 7) encased in a groove between sleeve 17 and core 4. Figure 1 does not support applicant's contention that at least 3 sides of buffer portion contact fuel passage. If it did, Reiter and Asano show like configurations and must also meet such a limitation.

In response to applicant's argument that coil and solenoid are not double inclusions because coil refers to element 6 and solenoid refers to element 2, applicant's specification indicates, on page 6, line 29, that coil 6 is an element of solenoid 2. Coil 6 is a subelement of solenoid 2 and should be defined as such.

In response to applicant's argument that the prior art does not show "substantially all of said buffer portion contacts fuel in said fuel passage," applicant's figure 1 shows a buffer portion 18 (a rubber ring per applicant's specification on page 7) encased in a groove between sleeve 17 and core 4. Figure 1 also shows the rubber ring in contact with sleeve 17 and core 4. Figure 1 does not support applicant's contention that at least 3 sides of buffer portion contact fuel passage. If it did, Reiter and Asano show like configurations and must also meet such a limitation.

9. Remainder of applicant's arguments with respect to claim 2 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (703) 308-8336. The examiner can normally be reached on Monday - Thursday, 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Y. Mar can be reached on (703) 308-2087. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.



Christopher S. Kim  
Examiner  
Art Unit 3752

CK  
March 19, 2003